

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604-3590

## **MEMORANDUM**

**SUBJECT:** Administrative Order

Urbana-Champaign Sanitary District

Urbana, Illinois

FROM:

Noel Vargas

**Environmental Engineer** 

THROUGH: Dean Maraldo, Chief

Water Enforcement and Compliance Assurance Branch

TO:

Tinka G. Hyde

Director, Water Division

I am writing to recommend that you sign the accompanying administrative order to be issued to the Urbana-Champaign Sanitary District (UCSD). The order alleges that the UCSD violated the Clean Water Act by discharging sanitary sewer overflows to Salt Creek and certain of its tributaries. It requires the UCSD to: (1) complete a Sanitary Sewer Evaluation Survey (SSES), (2) implement the actions contemplated in the SSES after they have been approved by EPA, and (3) update its current sewer Capacity, Management, Operation, and Maintenance (CMOM) Programs. In addition, the document requires the UCSD to describe the circumstances surrounding the bypasses that have occurred at its wastewater treatment plant.

The UCSD Northeast (NE) plant serves Urbana, Champaign, the University of Illinois, and unincorporated areas. One of the unincorporated areas, known as the Scottswood subdivision, is an area with reported high minority population that has experienced many SSOs. Issuance of this order to UCSD will allow the Region to claim that the UCSD service area is "addressed" under OECA's SSO Strategy, given that these communities constitute more than 67 percent of the flows treated at the NE plant.

Illinois EPA is aware that the Region intends to take action against UCSD. They do not object to the actions.



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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MAR 11 2011

REPLY TO THE ATTENTION OF: WC-15J

## <u>CERTIFIED MAIL</u> 7009 1680 0000 7660 9791 <u>RETURN RECEIPT REQUESTED</u>

Michael R. Little, Executive Director Urbana-Champaign Sanitary District 100 E. University Avenue P.O. Box 669 Urbana, Illinois 61803-0669

Subject:

Urbana-Champaign Sanitary District Order for Compliance

Pursuant to 33 U.S.C. §§ 1319(a)(3) Docket No. V-W-11-AO- (7)

Dear Mr. Little:

Protecting water quality is a high priority of the U. S. Environmental Protection Agency. Pollutants such as pathogens discharged to waterways from sanitary sewer overflows contribute to poor water quality and impairment of uses of those waterways.

EPA is issuing this administrative order to the Urbana-Champaign Sanitary District ("UCSD" or "you"), pursuant to section 309(a) of the Clean Water Act (CWA), 33 U.S.C. § 1319(a). In the Order, EPA asserts that the UCSD has violated the conditions of permit number IL0031500 issued under the National Pollutant Discharge Elimination System (NPDES) and seeks to bring you back into compliance with the terms of the permit.

In July 2010, representatives of EPA and the Illinois EPA conducted a compliance evaluation inspection at the UCSD. Information gathered during the field inspection and additional information provided by you demonstrate that the UCSD has discharged untreated sanitary waste in the form of sanitary sewer overflows on numerous occasions to waters of the United States, in violation of specific terms of the NPDES permit. Further information gathered during the field inspection demonstrates that the UCSD has bypassed secondary treatment at the Northeast Wastewater Treatment Plant, in violation of the terms of the NPDES permit. A copy of the inspection report is appended to the enclosed Order as Attachment A. The copy does not include all of the attachments listed on the inspection report, but these attachments can be provided if you so request.

Please send your written responses to the addresses specified in the Order. This Order requires you to immediately cease all sanitary sewer discharges and unpermitted bypasses and take any necessary action to comply with the CWA. Please note that within 5 days of this Order's receipt, the UCSD may request a conference with EPA to discuss the terms of the Order or any other information you feel we should consider. Paragraph 33 of the Order includes details regarding how and when to request a conference.

If you have any questions or concerns, please contact Noel Vargas, at (312) 353-3575 or vargas.noel@epa.gov, or your legal counsel may contact Andre Daugavietis, Associate Regional Counsel, at (312) 886-6663 or daugavietis.andre@epa.gov.

Sincerely,

Tinka G. Hyde

Director, Water Division

cc: Mike Garretson w/enclosure, IEPA Joe Koronkowski w/enclosure, IEPA Champaign Office

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 5

IN THE MATTER OF:	)
URBANA CHAMPAIGN	DOCKET NO.: V-W-11-AO- 03
SANITARY DISTRICT	PROCEEDING UNDER
RESPONDENT.	) SECTIONS 308(a) & 309(a) ) OF THE CLEAN WATER ACT
	)

# FINDING OF VIOLATION AND ORDER FOR COMPLIANCE

## **STATUTORY AUTHORITY**

- 1. The Director of the Water Division, U.S. Environmental Protection Agency (EPA) Region 5, makes the following **FINDINGS** and issues the following **ORDER** pursuant to the authority of the Administrator of EPA under Sections 308 and 309(a) of the Clean Water Act ("CWA"), 33 U.S.C. §§ 1318 & 1319(a). The Administrator delegated this authority to the Regional Administrator, EPA, Region 5, who then redelegated the authority to the Director of the Water Division, EPA, Region 5.
- 2. Section 301(a) of the CWA, 33 U.S.C. § 1311(a), prohibits the discharge of pollutants to the waters of the United States by any person except in compliance with a permit issued under the authority of the CWA.
- 3. Section 308(a) of the CWA, 33 U.S.C. § 1318(a), authorizes the Administrator to require the owner or operator of any point source to establish and maintain records, make reports, install, use and maintain monitoring equipment, sample effluent and provide any other information she may reasonably require to carry out the objectives of the CWA.
- 4. Section 309(a)(3) of the CWA, 33 U.S.C. § 1319(a)(3), states that whenever the Administrator finds a person in violation of section 301(a) of the CWA, 33 U.S.C. § 1311(a), she may issue an order requiring that person to comply with the requirements of the Act.
- 5. Section 402 of the CWA, 33 U.S.C. § 1342, establishes the National Pollutant Discharge Elimination System ("NPDES") by which the Administrator may issue permits for the discharge of pollutants to the waters of the United States subject to certain conditions. On October 23, 1977, EPA has granted the State of Illinois'

Environmental Protection Agency (IEPA) approval to issue NPDES permits pursuant to Section 402(b) of the CWA.

## **FINDINGS**

- 6. The Urbana Champaign Sanitary District (UCSD) is a municipal body which provides wastewater treatment for properties in the Cities of Urbana and Champaign, the Village of Savoy, the University of Illinois, and the surrounding adjacent developed areas.
- 7. The UCSD owns and operate two wastewater treatment plants (WWTP). One of them is the Northeast (NE) WWTP, located at 5500 E. University Avenue, in Urbana, Illinois. The NEWWTP treats 12 millions of gallons (MGD) of wastewater per day.
- 8. The NEWWTP discharges through two Outfalls (001 and 002) to the Saline Branch Drainage Ditch. This ditch is a tributary to the Salt Fork Creek, which in turn is a tributary to the Vermillion River, a water of the United States and thus a "navigable water" pursuant to Section 502(7) of the CWA, 33 U.S.C. § 1362(7).
- 9. Any constructed overflow point or other discrete fissure in Respondent's sanitary sewer system from which sewage has been or may be discharging constitute a "point source", pursuant to Section 502(14) of the CWA, 33 U.S.C. § 1362(14).
- 10. Sanitary sewage is a "pollutant," pursuant to Section 502(6) of the CWA, 33 U.S.C. § 1362(6).
- 11. A "discharge of pollutant" as defined at Section 502(12)(a) of the CWA, 33 U.S.C. § 1362(12)(a), is any addition of any pollutant to navigable waters from any point source.
- 12. On May 15, 2006, IEPA issued NPDES permit number IL0031500 to UCSD. The NPDES permit became effective in June 1, 2006 and expires in March 31, 2011.
- 13. Respondent's permit, special condition 5 states that "the effluent, alone or in combination with other sources, shall not cause a violation of any applicable water quality standard outlined in 35 Ill. Adm. Code 302." Outfall 001 and the "Champaign Bypasses" to Salt Creek (Outfall 002 or Excess Flow Outfall) caused the exceedance of, among other things, fecal coliform permit limits.

Date of Location		Receiving	
SSO event		source	
9/30/10	Outfall 001	Salt Creek	
7/31/10	Outfall 001	Salt Creek	
9/30/09	Outfall 001	Salt Creek	

7/31/09	Outfall 001	Salt Creek
6/30/09	Outfall 001	Salt Creek
6/18/09	Champaign Bypass	Salt Creek
5/16/09	Champaign Bypass	Salt Creek
5/15/09	Champaign Bypass	Salt Creek
5/13/09	Champaign Bypass	Salt Creek
12/27/08	Champaign Bypass	Salt Creek
9/14/08	Champaign Bypass	Salt Creek
6/4/08	Champaign Bypass	Salt Creek
6/3/08	Champaign Bypass	Salt Creek
2/6/08	Champaign Bypass	Salt Creek
2/5/08	Champaign Bypass	Salt Creek
2/4/08	Champaign Bypass	Salt Creek
1/15/07	Champaign Bypass	Salt Creek
1/14/07	Champaign Bypass	Salt Creek

- 14. The discharges listed in the preceding paragraph constitute discharges of pollutants from point sources to the waters of the United States in violation of a condition of a permit issued under Section 402 of the CWA, 33 U.S.C. § 1342, and consequently violations of Section 301(a) of the CWA, 33 U.S.C. § 1311(a).
- 15. Attachment H of the permit, Standard Condition number (5) states that the "permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit."
- 16. On the following dates, the UCSD reported the following sanitary sewer overflow discharges from its sanitary sewage system:

Date of SSO event	Location	Cause	
7/7/10	2401 E. Elm St.	Unknown	
6/17/10	205 Kenyon Rd.	Unknown	
6/16/10	2425 E. Nevada St.	Unknown	
6/15/10	807 McArthur Dr.	Unknown	
6/18/10	1406 Carroll Ave.	Unknown	
4/9/10	1510 Fairlawn St.	Leak in force main	
2/22/10	805 Pfeiffer St.	Unknown	
12/15/09	807 McArthur Dr.	Fat, oil and/or grease	
10/16/09	1003 N. Eastern Ave.	Debris buildup	

8/28/09	storm sewer		
0.11.0.1.			
8/18/09	708 McArthur Dr.	Debris buildup	
8/17/09	405 GH Baker Ave.	Fat, oil and/or grease	
8/17/09	708 McArthur Dr.	Debris buildup	
8/8/09	301 Dodson Dr.	Root intrusion	
8/5/09	Gregory & Green	Fat, oil and/or grease	
6/19/09	402 Scottswood St.	Fat, oil and/or grease	
6/5/09	1302 Dawn Rd.	Blow jack from jetting	
5/13/09	2401 E. Elm St.	Capacity limitations	
5/13/09	708 McArthur Dr.	Capacity limitations	
5/4/09	405 GH Baker Ave.	Fat, oil and/or grease	
4/30/09	1303 Lincolnshire Dr.	Root intrusion	
2/21/09	2214 ½ E. Main St.	Debris buildup	
12/21/08	2018 Prairie View Dr.	Debris buildup	
9/9/08	1223 Paula Cr.	Debris buildup	
8/26/08	1901 Golfview St.	Debris buildup	
8/25/08	310 Yankee Ridge	Blow jack from jetting	
8/11/08	701 Dodson Dr.	Blow jack from jetting	
7/19/08	404 GH Baker	Unknown	
6/2/08	606 Dodson Dr.	Fat, oil and/or grease	
5/20/08	2806 E. Washington St.	Blow jack from jetting	
5/10/08	2174 E. Washington St.	Blow jack from jetting	
3/3/08	2718 E. California Ave.	Fat, oil and/or grease	
2/7/08	414 Wilbur Ave.	Capacity limitations	
2/5/08	Broadway Avenue	Capacity limitations	
12/13/07	1414 S. Neil St.	Debris buildup	
12/4/07	501 Dodson Dr.	Blow jack from jetting	
11/12/07	2719 E. High Ave.	Root intrusion	
11/9/07	2719 E. High Ave.	Root intrusion	
10/29/07	2410 E. Illinois Ave.	Debris buildup	
10/22/07	2609 E. High Ave.	Debris buildup	
8/20/07	2701 E. Illinois Ave.	Fat, oil and/or grease	
3/12/07	303 Yankee Ridge	Unknown	
1/14/07	2018 Prairie View Dr.	Root intrusion	
12/2/06	807 McArthur Dr.	Fat, oil and/or grease	
8/26/06	309 Dodson Dr.	Fat, oil and/or grease	
3/27/06	2402 E. Washington St.	Fat, oil and/or grease	

17. The discharges listed in the preceding paragraph constitute sanitary sewer overflow discharges caused by improperly operated and maintained sanitary sewer system, in violation of a condition of a permit issued under Section 402 of the CWA, 33 U.S.C. § 1342, and consequently violations of section 301(a) of the CWA, 33 U.S.C. § 1311(a).

- 4 -

## **ORDER FOR COMPLIANCE**

- 18. **BASED ON THE FOREGOING FINDINGS** and the authority vested in the undersigned Director, Water Division, **IT IS HEREBY ORDERED** in accordance with Sections 308(a) and 309(a)(3) of the CWA, 33 U.S.C. §§ 1318(a) & 1319(a)(3), that Respondent complete the actions detailed in the following paragraphs.
- 19. Within 15 calendar days of receipt of this Order, Respondent must submit a written certification of its intent to comply with this Order.
- 20. Respondent must immediately begin forwarding copies of all notifications it makes to IEPA under state law regarding the unauthorized discharge of sanitary sewage from its collection system to EPA to the following address:

Noel Vargas (WC-15J)
Water Enforcement and Compliance Assurance Branch
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

- 21. Respondent must properly manage, operate, and maintain all parts of its sewer collection system at all times. This requirement includes:
  - a. Providing adequate capacity to convey base flows and peak flows for all parts of the sewer system;
  - b. Eliminating all known SSOs and continuing to monitor for the existence of new SSOs for all parts of the sewer system and mitigating the effects of SSOs on human health and the environment; and
  - c. Notifying all parties who may be exposed to pollution associated with any overflow event.
- 22. Within 5 calendar days of receipt of this Order, Respondent must implement a procedure to report all SSOs from its sewers. This procedure must include:
  - a. Notification to IEPA (1-217-278-5800) or the Illinois Emergency Management Agency (1-800-782-7860) and the Urbana-Champaign Public Health District, Champaign County Public Health Department (217-531-3386), as appropriate, within 1 hour of learning of the SSO. Notification will include the location of the SSO, the receiving water, if any, and an estimate of the volume of the SSO.
  - b. A written report to IEPA (with a copy to the EPA) within 5 calendar days of the date Respondent became aware of the overflow. The written report must contain:

- i. The location of the SSO;
- ii. The receiving water, if any;
- iii. An estimate of the volume of the SSO:
- iv. A description of the sewer component from which the release occurred;
- v. The estimated date and time when the overflow began and stopped or will be stopped;
- vi. The cause or suspected cause of the overflow;
- vii. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps; and
- viii. Steps taken or planned to mitigate the effects of the overflow and a schedule of milestones for those steps.
- 23. Within 60 calendar days of receipt of this Order, Respondent must identify and implement an ongoing public notification program to inform the public of: the locations of any SSOs; SSO occurrences; the possible health and environmental impacts associated with SSOs; the potential health risks associated with contact recreation when bacterial levels are elevated; and potential impacts of SSO events on downstream public water supplies. At a minimum, the public notification program must include signs at recurring SSO locations, internet postings, billing inserts, and notice to potentially affected public water supply operators, as applicable.
- 24. Within 60 calendar days of receipt of this Order, Respondent must submit to EPA for approval an Overflow Emergency Response Plan that identifies measures to mitigate the impacts of any SSO and protect public health and the environment. In addition to the public notification program described in the preceding paragraph, this plan must include:
  - a. a mechanism to ensure that Respondent is promptly made aware of all SSOs from the sewer system;
  - b. procedures to ensure appropriate responses to SSOs, including ensuring that reports of overflows are immediately communicated to personnel for investigation and response;
  - c. procedures to ensure that personnel are aware of and follow the Overflow Emergency Response Plan and are properly trained in that plan; and

- d. emergency operations procedures.
- 25. Within 30 calendar days of approval by EPA, Respondent must implement the approved Overflow Emergency Response Plan.
- 26. Within 1 year of receipt of this Order, Respondent must submit to EPA for approval a sewer system evaluation study (SSES), including a schedule for implementation of all cost-effective rehabilitation or replacement work. The goals of the SSES are to identify sources and quantities of clear water inflow and infiltration into all publicly- and privately-owned portions of Respondent's sewer system, take all feasible steps to eliminate the clear water entering the sewer system, and to establish means of mitigating the impact of I/I on SSOs within Respondent's sewer system.
  - a. At minimum, the SSES must include:
    - i. an evaluation of the Respondent's entire sewer system;
    - ii. a physical survey of the sewer system and confirmation of the location, size, and capacity of all sewers, manholes, pump stations, overflow points, cross-connections with storm sewers, and any other appurtenances specific to Respondent's system;
    - iii. flow monitoring which, at minimum, at all interceptors within the sewer system. This monitoring must be conducted to adequately characterize collection system performance during wet and dry weather during the time period between March 31, 2011, and July 31, 2011. Flow monitoring also must be provided at all points of connection into downstream sewers owned by the UCSD, at all known overflow points, immediately upstream of all pump stations, and at any other points deemed necessary to complete the rest of the evaluation detailed below;
    - iv. estimates of peak flows (including flows from SSOs that escape from the system) associated with wet weather conditions;
    - v. identification of the locations of any hydraulic deficiencies (including components of the system with limiting capacity) that are generating SSOs themselves;
    - vi. identification of the locations of sources of clear water entry into the sewer system, and an estimate of the benefit (in terms of flow removed) of eliminating each source; and
    - vii. determination of the need for permanent flow meters to be installed and maintained at all connection points to the downstream sewers

that are owned by the UCSD, and that are less than 12 inches in diameter.

- b. The SSES must be conducted consistent with procedures outlined in the 1991 EPA "Handbook: Sewer System Infrastructure Analysis and Rehabilitation." Information on obtaining a copy can be found at the EPA web site <a href="http://www.epa.gov/OWM/secttre.htm">http://www.epa.gov/OWM/secttre.htm</a>.
- c. The SSES must recommend short- and long-term actions to eliminate each hydraulic deficiency identified. The recommendations must:
  - i. list all technically feasible alternatives to eliminate the deficiency;
  - ii. estimate the costs for each alternative;
  - iii. identify recommended alternatives for eliminating the deficiency;
  - iv. group the alternatives in projects as appropriate; and
  - v. prioritize the projects and provide a schedule for implementation of all recommended projects. If a project is not recommended, or if an implementation schedule is determined principally by the affordability of the project, Respondent must provide an analysis of the cost effectiveness of the project, including impacts on user rates and the frequency, volume and duration of overflows.
- d. The SSES must identify both short-term and long-term actions to eliminate each source of clear water entry into the sewer system. For each source, the SSES must identify:
  - i. alternative actions to eliminate the source;
  - ii. the costs for each alternative; and
  - the recommended alternative for eliminating the source. Group the alternatives in projects as appropriate, prioritize the projects and provide a schedule for implementation of all recommended projects. If a project is not recommended, or if an implementation schedule is determined principally by the affordability of the project, Respondent must provide an analysis of the cost effectiveness of the project, including impacts on user rates and the frequency, volume and duration of overflows.
- 27. If EPA, in consultation with IEPA, determines that the proposed SSES implementation schedule is unacceptable, EPA will so notify Respondent and provide

corrective comments as appropriate. Respondent must revise the schedule, incorporating EPA's comments, within 30 calendar days of the date of the notification from EPA.

- 28. Within 30 calendar days of SSES approval, Respondent must begin implementing the recommendations of the SSES on the schedule contained in the approved SSES. This Order will automatically incorporate the implementation schedule as approved by EPA.
- 29. The SSES must be reviewed and updated by Respondent as needed to reflect current information on the performance measures that have been implemented. Any update or modification to the approved SSES should be submitted to the EPA for approval.
- 30. Within 90 calendar days of receipt of this Order, Respondent must: update its existing Capacity, Management, Operation and Maintenance (CMOM) Program, in accordance with the "Guide for Evaluating CMOM Programs at Sanitary Sewer Collection Systems" EPA 305-B-05-002, January 2005, for all parts of its sewer system; and submit a written description of its CMOM program to EPA for approval. Respondent must implement the CMOM program beginning within 30 calendar days after approval by EPA.
  - 31. At a minimum, Respondent's existing CMOM program must:
  - a. establish goals to achieve the elements set forth in paragraph 21 a. -c., above;
  - b. identify all the current administrative and maintenance positions responsible for implementing measures to achieve the elements established in paragraph 21, above;
  - c. identify the chain of communication for reporting SSOs from receipt of a complaint or other information to the person responsible for reporting each SSO incident to IEPA, the City and/or County Health Department or, where necessary, the public;
  - d. establish legal authority through sewer use ordinances, service agreements, or other legally binding documents, to:
    - i. control infiltration and connections from inflow sources;
    - ii. require that sewers and connections be properly designed and constructed;
    - iii. ensure proper installation, testing and inspection of new and rehabilitated sewers (such as new or rehabilitated collector sewers and/or new or rehabilitated service laterals); and

- e. establish and implement requirements and standards for the installation of new sewers, pumps and other appurtenances, and rehabilitation and repair projects;
- f. establish and implement procedures and specifications for inspecting and testing the installation of new sewers, pumps, and other appurtenances for rehabilitation and repair projects; and
- g. monitor the implementation and, where appropriate, measure the effectiveness of each element of the program.
- 32. Commencing immediately, Respondent will prepare annual reports for submission to EPA. The annual report will convey the following information:
  - a. Respondent's progress on the projects described in the SSES implementation schedule, including specific references to the projects in that schedule. Respondent must identify any deficiencies and all steps that have been taken or will be taken to correct the deficiencies.
  - b. Respondent's progress in implementing the CMOM program, once approved and incorporated into this Order.
  - c. An inventory of all SSOs from Respondent's sewers for the previous year, identifying the dates, sources, estimated volumes, receiving waters and principal pollutants contained in the discharges. Respondent must also issue a press release informing the public of the availability of the inventory and make the inventories available on its principal webpage.

The report must be postmarked by January 31 of the year following the year subject to reporting and must be submitted to Mr. Noel Vargas at the address provided in paragraph 20, above.

33. This Order will become effective immediately from the date the Respondent receives it, **unless within 5 days** of receipt Respondent requests an informal conference to discuss the Findings, the Order for Compliance or the Request for Information and to present any information it wishes EPA to consider regarding this document. Unless it is withdrawn or modified based on information presented in the informal conference, the Order will become effective 5 days from the informal conference. If an informal conference is requested, it will be held at EPA's Region 5 offices at 77 West Jackson Boulevard, Chicago, Illinois. Alternatively, it can be conducted by telephone at Respondent's request. Respondent may be represented by counsel at the informal conference, but the conference will not take the form of a hearing. To request an informal conference, Respondent should contact Mr. Noel Vargas (312) 353-3575, or Respondent's attorney may contact Andre Daugavietis of our Office of Regional Counsel, at (312) 886-6663.

34. The requirements of this Order will terminate upon written request from Respondent after all requirements of this Order have been satisfied and Respondent can demonstrate continuous compliance with the CWA for a period of at least 2 years.

## **GENERAL PROVISIONS**

35. Written statements submitted pursuant to this Order must be returned under an authorized signature certifying that all statements contained therein are true and accurate to the best of the signatory's knowledge and belief. The signatory must possess the authority to sign NPDES permit applications and reports described in 40 C.F.R. § 122.22. Any documents submitted to EPA pursuant to this Order should be certified as authentic to the best of the signatory's knowledge and belief using the following statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

- 36. Should the signatory find at any time after submittal of the requested information that any portion of its response is false or incorrect, Respondent must notify EPA Region 5 immediately. Respondent's failure to fully comply with this Order may subject Respondent to an enforcement action under Section 309 of the CWA, 33 U.S.C. § 1319. Knowing submittal of false information to EPA in response to this request may subject you to criminal prosecution under Section 309(c) of the CWA, 33 U.S.C. § 1319(c), as well as 18 U.S.C. §§ 1001 and 1341.
- 37. Pursuant to 40 C.F.R. part 2, subpart B, Respondent is entitled to assert a claim of business confidentiality regarding any portion of the information submitted in response to this request, except effluent data, as defined at 40 C.F.R. § 2.302(a)(2). If Respondent fails to assert a claim of business confidentiality, EPA may make all submitted information available to the public without further notice. Information which is subject to a claim of business confidentiality may be available to the public only to the extent provided in 40 C.F.R. part 2, subpart B.
- 38. Any information submitted in response to this Order may be used by EPA in support of an administrative, civil, or criminal action against Respondent. The CWA includes provisions for administrative penalties, for civil injunctive relief and penalties,

and for criminal sanctions for violations of the CWA. Specifically, EPA may assess civil administrative penalties of \$11,000 per day of violation, up to a maximum of \$157,500 under 33 U.S.C. § 1319(g), and 40 C.F.R. part 19, for violations occurring after March 15, 2004, and \$16,000 per day of violation up to a maximum of \$177,500 for violations occurring after January 12, 2009. Additionally, EPA may seek civil judicial penalties of \$32,500 per day of violation occurring before January 12, 2009, and \$37,500 for violations occurring thereafter. The CWA also provides for civil injunctive relief for violations of the CWA under 33 U.S.C. § 1319(b). Furthermore, EPA may seek criminal sanctions, including fines and imprisonment, for negligent or knowing violations of the CWA under 33 U.S.C. § 1319(c).

39. This request is not subject to the Paperwork Reduction Act, 44 U.S.C. §§ 3501-3520, because it seeks collection of information in an enforcement action or investigation involving EPA and specific individuals or entities.

Date: 11 MARCH ZON

← Tinka G. Hỳde

Director, Water Division

U.S. Environmental Protection Agency, Region 5

### <u>Attachment</u>

## AUTHORITY AND CONFIDENTIALITY PROVISIONS

#### Authority

Information requests are made under authority provided by Section 308 of the Clean Water Act, 33 U.S.C. 1318. Section 308 provides that: "Whenever required to carry out the objective of this Act, ...the Administrator shall require the owner or operator of any point sources to (i) establish and maintain such records, (ii) make such reports, (iii) install, use and maintain such monitoring equipment and methods (including where appropriate, biological monitoring methods), (iv) sample such effluent... and (v) provide such other information as he may reasonably require; and the Administrator or his authorized representative, upon presentation of his credentials, shall have a right of entry to...any premises in which an effluent source is located or in which any records...are located, and may at reasonable times have access to and copy any records...and sample any effluents..."

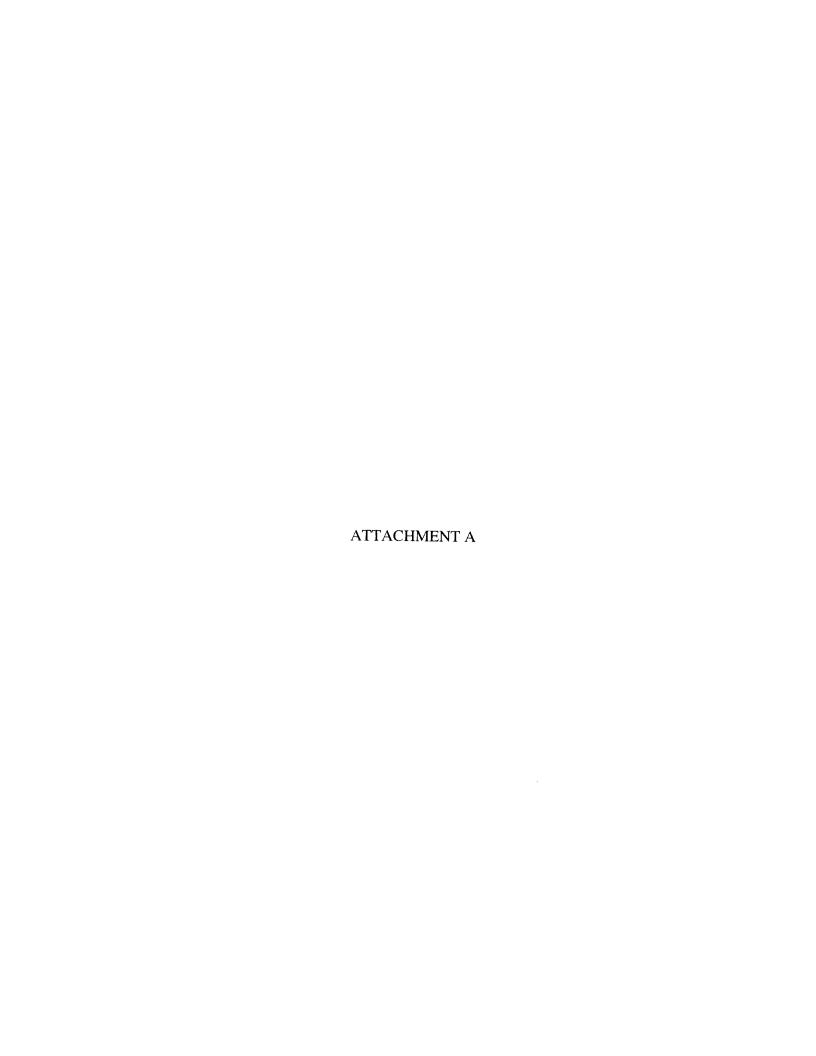
Please be advised that the submission of false statements is subject to federal prosecution under 18 U.S.C. §1001 and that this or any other failure to comply with the requirements of Section 308 as requested by U.S. EPA may result in enforcement action under the authority of Section 309 of the Clean Water Act, which provides for specified civil and/or criminal penalties.

#### Confidentiality

U.S. EPA regulations concerning confidentiality and treatment of business information are contained in 40 CFR Part 2, Subpart B. Information may not be withheld from the Administrator or his authorized representative because it is viewed as confidential. However, when requested to do so, the Administrator is required to consider information to be confidential and to treat it accordingly, if disclosure would divulge methods or processes entitled to protection as trade secrets (33 U.S.C. §1318(b) and 18 U.S.C. §1905), except that effluent data (as defined in 40 CFR §2.302(a)(2)) may not be considered by U.S. EPA as confidential.

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Note: This information request is not subject to the approval requirements of the Paperwork Reduction Act of 1995, 44 U.S.C. § 3501 et seq.



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY **REGION 5**

Purpose:

Sanitary Sewer Overflow (SSO) site inspection

Facility:

Urbana Champaign Sanitary District

1100 E. University Ave. Urbana, Illinois 61803

**Date of Inspection**: July 7 - 8, 2010

## **USEPA** Representative:

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## Report Prepared by:

Noel Vargas, Environmental Engineer, 312-353-3575

Report Date: August 5, 2010

## **BACKGROUND**

The U.S. Environmental Protection Agency (EPA) visited the Urbana-Champaign Sanitary District (UCSD) to conduct a sanitary sewer overflow (SSO) inspection. Mr. Jeffrey Holste of the Illinois EPA, Champaign Regional Office, participated in the inspection. He and a summer intern were present only during the July 7<sup>th</sup> inspection. The UCSD owns and operate two publicly owned treatment works (POTWs): the Northeast (NE) treatment plant (NETP) and the Southwest (SW) treatment plant (SWTP). The NETP is designed to treat 17.3 MGD of raw sewage, and it is the focus of this inspection. Refer to Attachment 1 for an aerial photograph of the plant.

The UCSD also owns, operates, and maintains the interceptor sewer systems that serve the satellite communities of Champaign, Urbana, Savoy, and the University of Illinois (U of I); and the collection systems from the unincorporated areas. All of the City of Urbana, the U of I, and part of Champaign satellite systems are tributary to the NEPT. The Village of Savoy and part of the City of Champaign are tributary to the SWTP.

The UCSD does not own or operate the collection systems from any of its satellite communities. According to the 308 response (See Attachment 2), 46 % of the incoming flow at the NETP is from Champaign, 25 % from Urbana; 22 % from the U of I, and the rest from the unincorporated areas. One of the unincorporated areas is the Scottswood subdivision, located at the southeast side of Urbana (jurisdiction of Cunningham Township).

The NETP was built in 1924. With the passage of the Clean Water Act (CWA), the plant was upgraded and expanded again between 1977 and 1982. Additional levels of treatment were added to the plant including nitrification towers for ammonia removal, excess flow treatment, sludge thickening and mechanical sludge dewatering. In the late 1990's as the UCSD's facilities continued to age, technology continued to advance and the population of the service area continued to grow. In response to that, the UCSD initiated the Long Range Facility Plan (LRFP). The plan was adopted in April 2002, and recommended improvements for both plants to be implemented in four phases over a fifteen year period.

Construction of Phase I and II began in 2002 and was completed in 2005. Phase I consisted primarily of consolidation of all sludge handling and processing at the NETP, installation of high efficiency aeration systems, and construction of a methane gas fueled cogeneration facility to produce electricity and heat to be used in the plant. The 350 kilowatt (KW) generators were installed, generating between 33-50% of the daily electrical needs at the NETP, and all of the heat needed by the sludge digestion process. Phase II involved upgrading and expanding the SWTP to current technology levels including biological phosphorus removal, high efficiency aeration systems, cloth media disk filters, and a state of the art instrumentation and control system.

The LRFP was updated in 2007 before proceeding with Phases III and IV. The update concluded that both plants had adequate reserve capacity to meet the needs of the service area

until at least 2019. Construction on the Phase III and most of the Phase IV recommendations began in 2010 and is expected to be completed in 2012 at which time the LRFP will be updated again. These improvements are all at the NETP and include upgrading various treatment processes to current technology levels including state of the art instrumentation and control systems.

The NEPT discharges through two outfalls (001 and 002) to the Saline Branch Drainage Ditch. This ditch is tributary to the Salt Fork Creek, which in turns is tributary to the Vermillion River. The UCSD currently holds a National Pollutant Discharge Elimination System (NPDES) permit (IL0031500) that expires in March 31, 2011. The permit contains effluent limitations for both outfalls, but it does not address SSOs specifically (See Attachment 3).

#### **SITE INSPECTION**

The EPA representative arrived at 9:00 am. The weather was very hot and sunny, about 80°F. After presenting credentials, an initial conference followed. Most of this initial conference covered the basics of the plant operation, review of the responses to the 308 request, and discussions regarding areas where most of the SSOs have occurred.

At the time of the inspection, the plant was treating wastewaters at a rate of 10.71 MGD. See Attachment 4 for a copy of the control panel printout. Pictures were taken during the inspection, but unfortunately, these pictures were lost while being downloaded to the computer (See Attachment 5 for a list of sections of the plant, pump stations, manholes, and the equipments of which pictures were taken).

The plant tour started at 10:45 am. At the time of the tour, it was evident that some constructions as part of the LRFP were taking place throughout the plant. An expansion project of the headworks is being taking place and it is expected to be finished by January 2012. The new headworks will consist of two trains for screening and grit removal. It will be contained and odor controlled. Other construction project at the plant was the installation of new lines from the nitrification towers to the new filter cloth area. This area will provide more efficient tertiary treatment.

As the inspectors toured the plant, all the units and control systems were working as intended. Treated water was being discharged through outfall 001. The discharge plume was flowing east, towards the Salt Fork Creek. When the plant is experiencing an excess of sanitary flows, these are treated at the excess flow facility. This facility was built in 1982 and consists of primary clarification and disinfection. The excess flow clarifier was actually empty at the time of the inspection. According to the UCSD, the last discharge happened a "few days ago." This clarifier activates only when "needed" and it discharges through outfall 002.

During the afternoon, the inspectors were taken to areas where lift stations, pumps, generators, and manholes were located. As documented by the list of pictures and the order by

which they were taken, the inspectors visually inspected the lift stations and manholes. The lift stations appeared to be in good working condition. In terms of maintenance, the UCSD monthly inspects the mechanical components of these pumps, while the electrical components are inspected quarterly. The manholes were conveying flows as they normally do. Of the three inspected manholes, two of them: the Stadium Drive/Neil Street and the Broadway Street/Crystal Lake Drive have been experiencing most of the reported SSO.

According to the response to the 308 request, the UCSD reported 57 SSO in the last five years. Refer to the 308 response, pages 11 and 12 of Attachment 2 to see the SSO list. A few of them occurred in typical areas such as nearby the Urbana Country Club (GH Baker, Golfview, and Dawn Road), and at the Stadium Drive/Neil Street manhole. This particular manhole is very shallow and the UCSD plans to rehab it as part of the LRFP.

Others SSO were reported as bypasses at the NETP (11 in total). These bypasses resulted in discharges to the Saline Branch Drainage Ditch. However, the majority of the SSO reported were located within the Scottswood subdivision. This is an unincorporated area southeast of Urbana. Attachment 6 shows a map of the area, pinpointing those locations were SSO complaints were received. Wastewaters from this subdivision are treated at the NETP.

The SSO list in the 308 response was fu	arther analyzed, as follows:
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Year	Number of	Causes of the SSO	At Scottswood	% at Scottswood
	SSO reported		subdivision	subdivision
2009	18	Debris buildup, oil and grease,	8	44 %
		root intrusion, and capacity		
		limitations leading to a		
		waterway discharge		
2008	19	Debris buildup, oil and grease,	6	32 %
		and capacity limitations		
		leading to a waterway		
		discharge		
2007	10	Debris buildup, oil and grease,	7	70 % .
		root intrusion, and capacity		
		limitations leading to a		
		waterway discharge		
2006	3	Oil and grease	3	100 %
2005	7	Debris buildup, oil and grease,	3	43 %
		root intrusion, and capacity		
		limitations leading to a		
		waterway discharge		
Total	57		27	47 %

It is obvious that the Scottswood subdivision has a chronic SSO problem that needs to be further investigated. The inspectors toured this area during the afternoon of July 7<sup>th</sup>. As the

UCSD personnel guided the inspectors around the area, it appeared to have a high minority population. Most of this subdivision is composed of single-family residential units, including two mobile home parks. The UCSD is totally aware of the SSO situation in this area, which they believe is caused mostly by the flat topography of the area and geological conditions leading to poor drainage.

The guide tour concluded with a visual inspection to the Broadway Street/Crystal Lake Drive manhole, where a stoppage occurred as recent as June 2010. Because of the proximity to the NEPT, this manhole experiences frequent grit blockages that could contribute to overflows. After the tour, back to the NEPT, the inspectors visually inspected the maintenance equipment. Most of them were photographed (the jetter truck and Vactor, portable pumps, televising equipment, and back-up generators) and appeared to be in good working condition and well maintained. Other maintenance equipment is kept at the SWTP. Refer to Attachment 7 for the equipment inventory.

## **DOCUMENT REVIEW**

The second day of the inspection was dedicated to reviewing documents. Prior to the inspection taking place, the EPA requested that the UCSD have documents on site to be reviewed during the inspection (See Attachment 8). The UCSD provided all the documents for review.

The UCSD has an adequate recordkeeping process in place. Most of the documentation for discharge monitoring records, preventive maintenance, and work order forms are done electronically. The UCSD uses a "Complaint Log Report" to document SSO (See Attachment 9). Notice that these reports do not provide a contact number for the County Health Department to alert them of this potential public health hazard. In addition, these reports do not provide for recording the amount of SSO discharged or whether it discharged to a waterway or on land.

In 1975, the UCSD conducted studies at both plants, indicating the possibility of infiltration and inflow (I/I) in the system. As a result, a sanitary sewer evaluation study (SSES) was recommended. In December of 1976, the SSES was conducted at the UCSD, including the Scottswood subdivision (See Attachment 10). The SSES consisted mostly on smoke testing, which showed leaks at many points in the area. A newspaper article from November 6, 1981, indicated that "sewers in the city's newest subdivisions on the southeast side were designed in conjunction with the development of only 30 or 40 lots at a time, and area-wide planning was neglected." This area includes the Scottswood subdivision. According to the article, a "piecemeal approach was used to design the sewers in this area resulting in inadequate sewers." Refer to Attachment 11 for a copy of the article.

### **AREAS OF CONCERN**

- 1. Most of the SSO reported have taken place within the Scottswood subdivision. The area appears to consist of mostly single house residential and minority populated. There were two mobile home parks within the subdivision, as well. No I/I Study or SSES has been conducted in this area since 1976. Sewer cleaning at this subdivision has taken place, but it is not expected to be done until 2013. In the meantime, more SSO are still occurring here. So far this year, 4 out of 7 SSO in the UCSD has occurred at this subdivision in 2010 (See Attachment 9).
- 2. The DCPW does not seem to have a more systematic CMOM<sup>1</sup> program in place. The following CMOM program items were not available:
  - Regarding the collection system management and operation, the SSO notification program did not list any contact from the County Health Department. The SSO notification form did not provide for volume of SSO discharged.
  - Regarding the collection system operation and maintenance, the pump station list must be updated to include those where chronic SSO has occurred.
  - Regarding sewer system capacity evaluation, no flow measurements from the satellite communities are taken.

<sup>&</sup>lt;sup>1</sup> CMOM stands for Capacity, Management, Operation and Maintenance Program, as published in EPA Publication No. 305-B-05-002; January 2005.

## **List of Attachments**

- 1. Aerial map of site and nexus to the Saline Branch Drainage Ditch
- 2. Copy of UCSD's response to EPA request for information (308 request)
- 3. NPDES Permit
- 4. Control Panel printout at NEPT
- 5. Inspection Pictures (all taken by Mr. Noel Vargas)
- 6. Scottswood area map (SE of Urbana)
- 7. List of equipment inventory
- 8. Letter from EPA to UCSD announcing inspection and list of documents
- 9. UCSD Complaint Log Reports for 2010
- 10. December 1976 SSES
- 11. November 6, 1981 newspaper article
- 12. List of chronic areas in Urbana